

REMARKS

Claims 1-3, 5-17, 20-22, 24-27, 29-31, 39-53, 55-60, 62, 63, 65, 66, 68, and 69 are pending in the application, claims 4, 5, 18, 19, 23, 27, 28, 32-38, 54, 61, 64, 67 and 70-74 having been cancelled by the foregoing amendment. Applicants cancel the aforementioned claims without prejudice to filing the same or similar claims in a future divisional or continuation application. Of the remaining claims, claims 1, 44, 55, 62 and 68 are independent. Applicants amend claims 1, 2, 3, 6, 8, 20, 29, 41, 43, 44, 45, 48, 55 and 57. No new matter has been added.

I. Objection to Claim 5

Claim 5 is objected to because of informalities. Applicants cancel claim 5 without prejudice to filing the same or a similar claim in a future divisional or continuation application. Therefore, the objection to claim 5 is considered moot.

II. Rejections under 35 U.S.C. §102(b)

Claims 1-3, 5-17, 20-22, 25, 26, 29-31, 43-48, 50-53, 55-60, 62, 63, 65, 66, 68 and 69 stand rejected under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 5,944,686 to Patterson et al. (hereafter "Patterson"). Claims 1, 44, 55, 62 and 68 are independent. Applicants respectfully traverse the rejection.

For ease of discussion, each related claim set is discussed separately below.

Patterson is directed to an instrument for delivering a variable pressure stream of fluid as a coherent jet. (Patterson at Abstract). A deflector may be provided opposite the orifice to transform the jet stream into a harmless spray. (Patterson at Abstract). In contrast, the claimed invention describes a system in which *a non-liquid component*, such as a cutting blade or grinding burr, is employed to perform an excision (Application at [0054]).

As discussed below, Patterson does not anticipate claims 1-3, 5-17, 20-22, 25, 26, 29-31, 43-48, 50-53, 55-60, 62, 63, 65, 66, 68 and 69.

A. Claims 1, 2, 3, 5-17, 20-22, 25, 26, 29-31 and 43

Applicants respectfully submit that Patterson does not disclose at least the following elements of claim 1: (1) *an evacuation lumen comprising a jet-receiving opening locatable opposite the nozzle*; and (2) *a non-liquid jet tissue-excision component constructed and positioned to excise tissue during the surgical procedure*.

Claim 1 recites, amongst other features, *a jet-receiving opening locatable opposite the nozzle*. The Examiner points to element 36 of Patterson as a “jet-receiving opening.” Applicants respectfully disagree. Element 36 is a solid deflector which dissipates the jet (Patterson at col. 1 lns. 50-54). It does not constitute an *opening*.

Further, claim 1 as amended recites *a non-liquid jet tissue-excision component constructed and positioned to excise tissue during the surgical procedure*. The Examiner indicates that element 40 of Patterson corresponds to non-liquid jet tissue excision component of the present Application. (Office Action at page 3). Sharpened edge 40 is not a tissue-excision component.

Sharpened edge 40 is designed to “allow the surgeon to create an *incision* with the instrument.” (Patterson at col. 1, lns. 27-28). Sharpened edge 40 is designed only for the limited purpose of making an *incision*, and does not surgically remove or resect tissue and the like. But contrast, the *tissue-excision component* has a structure, function and operation for surgical removal or resection of tissue and the like. Therefore, sharpened edge 40 is not *a non-liquid jet tissue-excision component constructed and positioned to excise tissue during the surgical procedure*.

In light of the foregoing remarks, Applicants respectfully submit that Patterson does not disclose each and every element of claim 1. Claims 2, 3, 5-17, 20-22, 25, 26, 29-31 and 43 depend from claim 1 and therefore include each and every patentable element of claim 1. Thus, Patterson does not disclose each and every element of claims 2, 3, 4-17, 20-22, 25, 26, 29-31 and 43. Therefore, Applicants respectfully request that the 35 U.S.C. §102(b) rejection of claims 1, 2, 3, 5-17, 20-22, 25, 26, 29-31 and 43 be reconsidered and withdrawn.

B. Claims 44-48 and 50-53

Claim 44 recites, among other features, (1) *an evacuation lumen comprising a jet-receiving opening locatable opposite the nozzle* and (2) *a non-liquid jet, non-rotating tissue-excision component constructed and positioned to excise tissue during the surgical procedure*. Patterson does not anticipate claims 44-48 and 50-53.

The Examiner points to element 36 of Patterson as a “jet-receiving opening.” Applicants respectfully disagree. Element 36 is a solid deflector which dissipates the jet (Patterson at col. 1 lns. 50-54). It does not constitute an *a jet-receiving opening* as recited in claim 44.

Further, claim 44 as amended recites *a non-liquid jet tissue-excision component constructed and positioned to excise tissue during the surgical procedure*. The Examiner indicates that element 40 of Patterson corresponds to non-liquid jet tissue excision component of the present Application. (Office Action at page 3). Sharpened edge 40 is not a tissue-excision component.

Sharpened edge 40 is designed to “allow the surgeon to create an *incision* with the instrument.” (Patterson at col. 1, lns. 27-28). Sharpened edge 40 is designed only for the limited purpose of making an *incision*, and does not surgically remove or resect tissue and the like. But contrast, the *tissue-excision component* has a structure, function and operation for surgical removal or resection of tissue and the like. Therefore, sharpened edge 40 is not *a non-liquid jet tissue-excision component constructed and positioned to excise tissue during the surgical procedure*.

In light of the foregoing remarks, Applicants respectfully submit that Patterson does not disclose each and every patentable element of claim 44. Claims 45-48 and 50-53 depend from claim 44 and therefore include each and every patentable element of claim 44. Thus, Patterson does not disclose each and every element of claims 45-48 and 50-53. Therefore, Applicants respectfully request that the 35 U.S.C. §102(b) rejection of claims 44-48 and 50-53 be reconsidered and withdrawn.

C. **Claims 55-60**

Claim 55 recites, among other things, (1) *a non-liquid jet tissue-cutting component constructed and positioned to excise tissue during a surgical procedure*, and (2) *a nozzle that is shaped to form a liquid jet and is positioned to direct the liquid jet so that at least a portion of the liquid jet is contained within the receptacle, when the instrument is in operation*.

Patterson does not disclose these features of claim 55.

Claim 55 as amended recites *a non-liquid jet tissue-excision component*. The Examiner indicates that element 40 of Patterson corresponds to non-liquid jet tissue excision component of the present Application. (Office Action at page 3). Sharpened edge 40 is not a tissue-excision component.

Sharpened edge 40 is designed to “allow the surgeon to create an *incision* with the instrument.” (Patterson at col. 1, lns. 27-28). Sharpened edge 40 is designed only for the limited purpose of making an *incision*, and does not surgically remove or resect tissue and the like. But contrast, the *tissue-excision component* has a structure, function and operation for surgical removal or resection of tissue and the like. Therefore, sharpened edge 40 is not *a non-liquid jet tissue-excision component constructed and positioned to excise tissue during the surgical procedure*.

Claim 55 recites *a tissue receptacle configured and positioned to contain tissue*. The Examiner suggests that “the proximal end of the evacuation lumen may be interpreted as the tissue receptacle since the evacuation lumen draws debris and effluent away from the surgical site.” (Office Action at page 3). Applicants respectfully disagree.

As noted in the Specification, the tissue receptacle of claim 55 is a place where excised tissue can *collect* or *accumulate*. (See, e.g., Application at [0077] and [0078]). Figure 1 of Patterson clearly shows that any excised tissue would either be deflected off of the deflector 36, or proceed through the separate evacuation path 24-46, to be immediately removed by the

suction mechanism attached to side port 46. Therefore, the proximal end of the evacuation lumen is not *a tissue receptacle configured and positioned to contain tissue*.

Moreover, even if the proximal end of the evacuation lumen could be considered as a tissue receptacle (Applicants respectfully disagree), the liquid jet of Patterson still is not configured *so that at least a portion of the liquid jet is contained within the receptacle*, as recited in claim 55. As can be clearly seen in Patterson at Figures 1 and 2, the evacuation path 24-46 is located *behind* the nozzle of the liquid jet, which projects the liquid out, away from the evacuation path. As taught by Patterson, once the liquid jet 32 strikes the deflector 36, it is no longer a “liquid jet” but rather a “harmless spray.” (Patterson at col. 3 lns. 20-21). Therefore, no portion of the liquid jet is *contained in the evacuation lumen*, as described in claim 55.

In light of the foregoing remarks, Applicants respectfully submit that Patterson does not disclose each and every patentable element of claim 55. Claims 56-60 depend from claim 55 and therefore include each and every patentable element of claim 55. Thus, Patterson does not disclose each and every element of claims 56-60. Therefore, Applicants respectfully request that the 35 U.S.C. §102(b) rejection of claims 55-60 be reconsidered and withdrawn.

D. Claims 62, 63, 65 and 66

Claim 62 recites, among other features, (1) *a cup-shaped tissue receptacle configured and positioned to contain tissue*, and (2) *a nozzle that is shaped to form a liquid jet and is positioned to direct the liquid jet so that at least a portion of the liquid jet is contained within the receptacle, when the instrument is in operation*. Patterson does not anticipate claim 62.

Claim 62 recites *a cup-shaped tissue receptacle configured and positioned to contain tissue* and *a nozzle that is shaped to form a liquid jet and is positioned to direct the liquid jet so that at least a portion of the liquid jet is contained within the receptacle, when the instrument is in operation*. The Examiner suggests that “the proximal end of the evacuation lumen may be interpreted as the tissue receptacle since the evacuation lumen draws debris and effluent away from the surgical site.” (Office Action at page 3). Applicants respectfully disagree.

As noted in the Specification, the tissue receptacle of claim 62 is a place where excised tissue can *collect* or *accumulate*. (See, e.g., Application at [0077] and [0078]). Figure 1 of Patterson clearly shows that any excised tissue would either be deflected off of the deflector 36, or proceed through the separate evacuation path 24-46, to be immediately removed by the suction mechanism attached to side port 46. Therefore, the proximal end of the evacuation lumen is not *a tissue receptacle configured and positioned to contain tissue*.

Moreover, even if the proximal end of the evacuation lumen could be considered as a tissue receptacle (Applicants respectfully disagree), the liquid jet of Patterson still is not configured *so that at least a portion of the liquid jet is contained within the receptacle*. As can be clearly seen in Patterson at Figures 1 and 2, the evacuation path 24-46 is located *behind* the nozzle of the liquid jet, which projects the liquid out, away from the evacuation path. As taught by Patterson, once the liquid jet 32 strikes the deflector 36, it is no longer a “liquid jet” but rather a “harmless spray.” (Patterson at col. 3 lns. 20-21). Therefore, no portion of the liquid jet is *contained in the evacuation lumen*, as described in claim 62.

Still further, the proximal end of the evacuation lumen is not *cup-shaped*, as required by claim 62.

In light of the foregoing remarks, Applicants respectfully submit that Patterson does not disclose each and every patentable element of claim 62. Claims 63, 65 and 66 depend from claim 62 and therefore include each and every patentable element of claim 62. Thus, Patterson does not disclose each and every element of claims 63, 65 and 66. Therefore, Applicants respectfully request that the 35 U.S.C. §102(b) rejection of claims 62, 63, 65 and 66 be reconsidered and withdrawn.

E. Claims 68 and 69

Claim 68 recites *a curette device*. Patterson does not disclose *a curette device*. In fact, Patterson is silent as to this element of claim 68.

Therefore, Applicants respectfully submit that Patterson does not disclose each and every patentable element of claim 68. Claim 69 depends from claim 68 and therefore includes each and every patentable element of claim 68. Thus, Patterson does not disclose each and every element of claim 69. In light of the above remarks, Applicants respectfully request that the 35 U.S.C. §102(b) rejection of claims 68 and be reconsidered and withdrawn.

III. Rejections under 35 U.S.C. §103(a)

Claims 1-3, 5-17, 20-22, 24-26, 29-31, 39-53, 55-60, 62, 63, 65, 66, 68 and 69 stand rejected under 35 U.S.C. §103(a) as being unpatentable over WO 00/69348 to Moutafis et al. (hereafter “Moutafis”) in view of Patterson. Applicants respectfully traverse the rejection.

Moutafis, commonly assigned and having common inventors with Patterson, describes a surgical instrument similar in operation to Patterson.

A. Claims 1, 2, 3, 4-17, 20-22, 24-26, 29-31 and 39-43

The Examiner recognizes that Moutafis does not include a non-liquid jet tissue-cutting component. (Office Action at page 4). The Examiner cites Patterson for bridging the factual deficiencies of Moutafis. As discussed above in connection with the rejections under 35 U.S.C. §102(b), Patterson does not disclose *a non-liquid jet tissue-excision component ... wherein the nozzle is positioned, during operation of the instrument, to direct the liquid jet so as to contact tissue excised by the non-fluid jet tissue-cutting component during a surgical procedure*, which is present in claim 1.

Therefore, Patterson fails to bridge the factual deficiencies of Moutafis. Moutafis and Patterson, alone or in combination, do not disclose or suggest each and every element of claim 1. Claims 2, 3, 4-17, 20-22, 24-26, 29-31 and 39-43 depend from claim 1 and, as such, include each and every patentable element of claim 1. Therefore, Moutafis and Patterson do not disclose or suggest each and every patentable element of claims 2, 3, 4-17, 20-22, 24-26, 29-31 and 39-43. Applicants respectfully request that the 35 U.S.C. §103(a) rejection of claims 1, 2, 3, 4-17, 20-22, 24-26, 29-31 and 39-43 be withdrawn.

B. Claims 44-53

Claim 44 recites *a non-liquid jet, non-rotating tissue-excision component constructed and positioned to excise tissue during the surgical procedure*. As discussed above in Section III.A, the Examiner recognizes that Moutafis does not include a non-liquid jet tissue-cutting component. As discussed above, Patterson also does not disclose *a non-liquid jet, non-rotating tissue-excision component constructed and positioned to excise tissue during the surgical procedure*. Therefore, Patterson fails to bridge the factual deficiencies of Moutafis. Moutafis and Patterson, alone or in combination, do not disclose or suggest each and every element of claim 44. Claims 45-53 depend from claim 44 and, as such, include each and every patentable element of claim 44. Therefore, Moutafis and Patterson do not disclose or suggest each and every element of claims 45-53. Applicants respectfully request that the 35 U.S.C. §103(a) rejection of claims 44-53 be reconsidered and withdrawn.

C. Claims 55-60

Claim 55 recites *a non-liquid jet tissue-cutting component constructed and positioned to excise tissue during a surgical procedure*. As discussed above, the Examiner recognizes that Moutafis does not include a non-liquid jet tissue-cutting component. As discussed above, Patterson also does not disclose *a non-liquid jet tissue-cutting component constructed and positioned to excise tissue during a surgical procedure*, which is present in claim 55.

Further, as discussed above, Patterson does not disclose *a nozzle that is shaped to form a liquid jet and is positioned to direct the liquid jet so that at least a portion of the liquid jet is contained within the receptacle, when the instrument is in operation*, which is present in independent claim 55. Moutafis also does not disclose this feature of claim 55.

The Examiner claims that this feature of claim 62 is equivalent to element 140 of Moutafis. (Office Action at page 4). However, as can be seen in Moutafis at Figure 1, the nozzle is not *positioned to direct the liquid jet so that at least a portion of the liquid jet is contained within the receptacle* (element 140) *when the instrument is in operation*. In

Moutafis, the liquid jet 120 is deflected and dissipated as it enters jet-receiving opening 118. (Moutafis at page 23, first full paragraph). The excised material is then delivered by evacuation lumen 112 all the way along the length of the instrument, and is finally delivered through evacuation conduit 138 into drainage reservoir 140. (Moutafis at page 25, last paragraph, through page 26, first paragraph). By the time that the liquid that once constituted liquid jet 120 reaches the drainage reservoir 140, it can no longer be considered a “liquid jet.” In fact, Moutafis teaches away from *direct[ing] the liquid jet so that at least a portion of the liquid jet is contained within the receptacle*. At page 25, Moutafis states “the liquid contained in evacuation conduit 138 is under relatively low pressure and, accordingly, evacuation conduit 138 may be constructed, in preferred embodiments, of a low cost flexible material.” Directing the liquid jet so that it is contained within the receptacle would therefore damage the receptacle of Moutafis.

In contrast, the present invention’s tissue receptacle is positioned so that *at least a portion of the liquid jet is contained within the receptacle*. This is significant, because in the present invention, the tissue receptacle can be used to manipulate tissue during the surgical operation. (e.g., Application at [0077]). This is not possible with Moutafis’ system, because the tissue receptacle in Moutafis is located remotely from the liquid jet.

Therefore, Patterson fails to bridge the factual deficiencies of Moutafis. Moutafis and Patterson, alone or in combination, do not disclose or suggest each and every element of claim 55. Claims 56-60 depend from claim 55 and, as such, include each and every patentable element of claim 55. Therefore, Moutafis and Patterson do not disclose or suggest each and every element of claims 56-60. Applicants respectfully request that the 35 U.S.C. §103(a) rejection of claims 55-60 be reconsidered withdrawn.

D. Claims 62, 63, 65 and 66

Claim 62 recites *a nozzle that is shaped to form a liquid jet and is positioned to direct the liquid jet so that at least a portion of the liquid jet is contained within the receptacle, when the instrument is in operation*. As discussed above, Patterson does not disclose this feature of claim 62. Moutafis also does not disclose this feature of claim 62.

The Examiner claims that this feature of claim 62 is equivalent to element 140 of Moutafis. (Office Action at page 4). However, as can be seen in Moutafis at Figure 1, the nozzle is not *positioned to direct the liquid jet so that at least a portion of the liquid jet is contained within the receptacle* (element 140) *when the instrument is in operation*. In Moutafis, the liquid jet 120 is deflected and dissipated as it enters jet-receiving opening 118. (Moutafis at page 23, first full paragraph). The excised material is then delivered by evacuation lumen 112 all the way along the length of the instrument, and is finally delivered through evacuation conduit 138 into drainage reservoir 140. (Moutafis at page 25, last paragraph, through page 26, first paragraph). By the time that the liquid that once constituted liquid jet 120 reaches the drainage reservoir 140, it can no longer be considered a “liquid jet.” In fact, Moutafis teaches away from *direct[ing] the liquid jet so that at least a portion of the liquid jet is contained within the receptacle*. At page 25, Moutafis states “the liquid contained in evacuation conduit 138 is under relatively low pressure and, accordingly, evacuation conduit 138 may be constructed, in preferred embodiments, of a low cost flexible material.” Directing the liquid jet so that it is contained within the receptacle would therefore damage the receptacle of Moutafis.

In contrast, the present invention’s tissue receptacle is positioned so that *at least a portion of the liquid jet is contained within the receptacle*. This is significant, because in the present invention, the tissue receptacle can be used to manipulate tissue during the surgical operation. (e.g., Application at [0077]). This is not possible with Moutafis’ system, because the tissue receptacle in Moutafis is located remotely from the liquid jet.

Thus, Moutafis and Patterson, alone or in combination, do not disclose or suggest each and every element of claim 62. Claims 63, 65 and 66 depend from claim 62 and, as such, include each and every patentable element of claim 62. Therefore, Moutafis and Patterson do not disclose or suggest each and every element of claims 63, 65 and 66. Applicants respectfully request that the 35 U.S.C. §103(a) rejection of claims 62, 63, 65 and 66 be reconsidered and withdrawn

E. Claims 68 and 69

Claim 68 recites *a curette device*. The Examiner provides no support for the §103(a) rejection of claim 68. (Office Action at page 4). Nevertheless, neither Patterson nor Moufatis discloses *a curette device*. (see §II.D, *supra*). Both are silent as to this element of claim 68. Therefore, Applicants respectfully submit that Patterson and Moufatis, alone or in combination, do not disclose or suggest each and every element of claim 68. Claim 69 depends from claim 68, and as such includes each and every patentable element of claim 68. In light of the above remarks, Applicants respectfully request that the 35 U.S.C. §103(a) rejection of claims 68 and 69 be reconsidered and withdrawn.

CONCLUSION

In view of the above amendment, Applicants believe that the pending application is in condition for allowance. If the Examiner feels that there are any remaining issues, the Examiner is urged to call the Applicants' attorney at the phone number listed below.

Dated: March 21, 2008

Respectfully submitted,

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